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ABSTRACT

Data from the College Board's Admissions Test Program (ATP) Summary Reports are used to analyze the student market attraction for ATP report designations, the application rate, the acceptance rate, the enrollment yield, and the dropout rate for 254 different student groups for 251 colleges. Student groups are defined in terms of their College Board test scores and self-reported high school record, socioeconomic characteristics, college plans, and skills and abilities. The results are aggregated by classifications based on the colleges' academic selectivity level, their size, and the proportions of their students that are from their state and their region. (Author)

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ADMISSIONS-YIELD AND PERSISTENCE ANALYSIS

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Data from the College Board's Admissions Test Program (ATP) Summary Reports have been used to analyze the student market attraction for ATP report designations, the application rate, the acceptance rate, the enrollment yield, and the dropout rate for 254 different student groups for 251 colleges. Student groups are defined in terms of their College Board test scores and self-reported high school record, socioeconomic characteristics, college plans, and skills and abilities. The results are aggregated by classifications based on the colleges' academic selectivity level, their size, and the proportions of their students that are from their state and their region.

SUMMARY REPORTS FROM THE COLLEGE BOARD ADMISSIONS TESTING PROGRAM

Approximately one million high school students participate in the Admissions Testing Program (ATP) of the College Board each year (about one-third of each graduating class and three-fourths of those entering degree-credit college programs full time). Through the program, students taking the Scholastic Aptitude Test (SAT) and Achievement Tests provide information about their backgrounds, activities, and plans. Summary reports, in turn, provide this information to colleges in the form of a series of statistical profiles of high school seniors at various stages: prospective applicants (those who send ATP reports to the college); applicants; accepted applicants; enrolling freshmen; and students persisting through their freshman year.

By receiving at least 100 ATP reports from graduating seniors (at any time during their high school career), approximately 2,000 colleges are eligible to receive summary reports on their applicants, accepted applicants, and enrolling freshmen. Approximately 500 of these colleges do in fact indicate the subsequent admissions status of their prospective applicants (and many add students who had not originally sent ATP reports to them) in order to receive profiles of their applicants, accepted applicants, and enrolling freshmen. By indicating which of their enrolling freshmen persisted at the end of their freshman year, half of the 500 colleges receive comparable profiles of their persisting freshmen.

PURPOSE OF THIS STUDY

In these times, where the number of students of college-going age is beginning to decline, it is important for colleges to understand their market appeal and dropout rates for different types of students. An overall analysis of yield across a large number of colleges, differentiated by selectivity and size, can provide a useful benchmark against which individual colleges can compare themselves in terms of recruitment and admissions effectiveness, and can plan for financial aid, academic programs and placement, and student services.

PROCEDURES

For the 1976 freshman class, 251 colleges identified which of their enrolling freshmen persisted, and thereby received a full set of summary reports. For each of these colleges, 254 student groups have been defined in terms of College Board test scores, high school record, socioeconomic characteristics, intended fields of study, college plans, and skills and abilities. Most of the groups are defined by dichotomous pairs or mutually exclusive triplets, such as: males and females; income $20,000 or above, $12,000 up to $20,000, and below $12,000; etc. Some of the groups are defined in terms of more than two or three mutually exclusive categories, such as 28 of the groups defined in terms of subject matter.

Based on the college's identifications of admissions stage progression through persistence, the yield of each of the student groups, for each college, has been traced through each stage. This process originates with one of three source populations: the nation, the region, or the state. If at least one-quarter of a college's prospective applicants are from outside of its region, the national ATP group is considered the source population. If less than one-quarter are from outside of the region, but more than one-quarter are from out-of-state, then the college is considered regional. Otherwise, if at least three-quarters are in-state, the college is considered to draw from the state student market. Of the 251 colleges studies, 78 (31%) are national, 58 (23%) are regional, and 115 (46%) are "state" colleges.

The initial analysis is a market analysis. It examines the overall yield from the college's source population to its prospective applicants and the yield for each of the student groups. It indicates the drawing power of the college in terms of which student groups show interest and which do not. For example, a "state" college may draw 5% of all ATP students in its state, including 10% of its state's students interested in studying education, but only 2% of those interested in engineering.

The second analysis is one of followup. By examining the proportion of prospective applicants who apply, overall and for each of the student groups, it indicates what happens when students find out more about the college and receive their test scores.

The third analysis looks at acceptance patterns, by determining the proportion of applicants who are accepted, overall and for each of the student groups. In the same way, the fourth analysis shows enrollment patterns, and the fifth shows dropout patterns through the end of the freshman year.

After these analyses were performed for each of the 251 colleges, the overall yields and yields by student group were aggregated by type of college. For this purpose, colleges were grouped by academic level and size. Three groups were defined for each characteristic in order for approximately one-third of the colleges to be in each of the groups. For academic level, the average SAT-Verbal (SAT-V) score for 1976 enrolling freshmen was used: the high academic level is defined by an SAT-V average of 480 or better (this group is later referred to as "selective"; the medium academic level is defined by an SAT-V average of 435 to 479; and the low academic level is defined by an SAT-V average of below 435 (this group is later referred to as "nonselective"). For size, the number of students identified by the college as 1976 enrolling freshmen (and who responded to any question of the Student Descriptive Questionaire) was used: "large" means at least 500; "medium" size is 200 up to 500; and "small" means fewer than 200.

The essential part of what follows is an averaging, by student group, of the yield percentages of each of the five analyses across colleges, giving all colleges the same weight regardless of size. For a yield to be calculated, however, the base group had to contain at least 25 students. For example, to determine a persistence yield of enrolling freshmen interested in agriculture, there had to have been at least 25 enrolling freshmen interested in agriculture.

MARKET ANALYSIS

NATIONAL COLLEGES

The 78 national colleges are relatively selective and relatively small. In fact, not a single one is both large and nonselective. The largest number of them are medium-sized and selective.

The average national college received ATP reports from about 3,500 of the 1,063,488 1976 graduating seniors in the ATP, an overall prospective applicant rate of 0.33%. As expected, this rate is much higher for large colleges (0.83%) than for small colleges (0.06%). What is not expected, though, is that the rate for medium academic level colleges is one-third higher (0.44%) than for selective colleges (0.33%). Apparently, the reputation of the national, selective colleges results in a great deal of student self-selection.

Although the average rate is 0.33%, there are wide differences by student group. These differences are partly due to the definitions of the student groups. For instance, broad definitions, such as a dichotomy of an entire score range (e.g., Vocabulary SAT-V subscore 50 or above and below 50), lead to yields closer to average. In contrast, narrow definitions of a large number of categories of scores lead to yields that are more likely to differ from the average. Despite the recognition that the yield rates depend on the group definitions, it is still helpful to look at the high and low yields to ascertain patterns. This will be done for the national, regional, and state market analyses, and the application, acceptance, enrollment, and dropout analyses.

The Top 20

. The highest national yields are for Achievement Test takers, particularly those with high Achievement Test scores (the highest yield of 1.39% is for students scoring at least 600 on the Biology test). These students are very likely to send ATP reports to a national college, and probably are more likely to send multiple reports than are other students.

• Other high yield groups are those with very high SAT scores (for example, 0.90% for SAT-V 700-800) and those interested in one special field of study, military science (0.74%), that has a special national draw.

The Bottom 20

• The group with the lowest national yield consists of those with an educational goal of a two-year program or degree (0.09%): obviously two year programs or degrees are usually attained more locally.

• Groups intending to study in subject areas which have low SAT scores have low national yields: trade and vocational (SAT average 377, yield 0.10%), ethnic studies (390, 0.12%), nursing (387, 0.16%), elementary education (419, 0.16%), home economics (419, 0.18%), art (424, 0.19%), and police science (419, 0.20%).

• Groups defined in terms of low SAT or Test of Standard Written English (TSWE) scores or low high school rank have low yields that range from 0.12% to 0.18%.

• Students wishing to live at home are not interested in national colleges (yield of 0.15%).

• Since many national colleges require Achievement Tests, students who have not taken an Achievement Test have low yields (0.20%).

Other Groups

Sex. Males are more likely to show interest in national colleges than females, particularly for large and selective colleges. For large selective national colleges, males have twice the prospective applicant rate of females. For small nonselective national colleges, though, the situation is reversed: females have more than twice the rate of males.

Ethnic group. Whites in the ATP are more likely to send ATP reports to national colleges than are minorities in the ATP, particularly to small and selective colleges. (Orientals are an exception, though; their rate is higher

than that of Whites). Minorities are more likely to designate, as report recipients, nonselective national colleges, though.

High school rank. High school rank is positively associated with the national college student market, especially for selective college (where the rate for the top tenth is 6 times that of the bottom three-fifths) and large colleges. However, for nonselective colleges, students with lower high school rank are more likely to be prospective applicants.

Income. For selective national colleges, the yield is highly related to income (the rate for $30,000 or above is more than 3 times that of below $6,000). For nonselective national colleges, middle income groups are the least likely to show interest, and low income groups are the most likely.

Educational goal. Graduate study intentions are positively related to a show of interest in national colleges, especially for selective colleges and large colleges. Nonselective national colleges, though, are more likely to attract those interested in a Bachelor's degree.

Area of study. The areas of study with the lowest national yield were indicated in the bottom 20. In addition to the special case of military science, the high yield areas are among those with typically high SAT averages: pre-medicine (520, 0.61%), political science (504, 0.57%), English and literature (492, 0.51%), and the physical sciences (538, 0.50%). Two exceptions which have average or below average national yield rates despite very high SAT averages are engineering (501, 0.35%) and philosophy and religion (484, 0.28%). Nonselective national colleges have an appeal for physical education intended majors that is four times the average yield and an appeal for theater arts that is about four times the average. Generally, small national colleges attract those interested in humanities (at a rate of more than two to one) while the large and selective colleges attract those interested in the sciences.

Other characteristics. The following are also positively related to national

college yield, especially for selective and large colleges: years of study in academic subjects: honors and awards: high school activities; self-reported skills and abilities (especially science and mathematics): college extracurricular activity plans (particularly journalism, debating, and dramatics and student government); and advanced placement plans. Both past athletic activities and athletic intentions are also related to yield, perhaps surprisingly more so for selective colleges than for nonselective colleges.

REGIONAL COLLEGES

Like the national colleges, the regional colleges are relatively selective and relatively small. The average regional college received ATP reports from 1.5% of the students in the ATP from its region. Of course, this rate is much higher for large colleges (4.6%) than for small colleges (0.4%). Unlike national colleges, though, the rate is higher for selective colleges (1.9%) than for medium-sized academic level colleges (1.2%); nonselective regional colleges have the same rate (1.2%) as medium academic level colleges.

The Top 20

. The top 20 consists mainly of Achievement Test takers. However, whereas the highest rates nationally are for those with high Achievement Test scores, the highest regional rates are for those with middle or low scores (the highest yield of 2.8% is for those scoring 500-599 on the Biology test).

. Two other very high yields are for those wishing to live in a fraternity or sorority (2.3%) and those with incomes over $30,000 (2.1%).

The Bottom 20

. The lowest yield is in the subject area of ethnic studies (0.4%). Three other subject areas are also in the bottom 20: trade and vocational (0.7%), art (1.0%), and nursing (1.0%).

• A goal of a two-year program or degree has a very low yield for regional colleges (0.6%) as well as for national colleges.

• Groups with low SAT or TSWE scores are well represented in the bottom 20 at the 0.7% to 1.0% level.

• Students with fewer than four years of English in high school are unlikely to be interested in a regional college (0.9%).

• Those wishing to commute have low yields (0.9% to 1.0%).

• Although the overall rate for minorities misses the bottom 20, the rates for three minority ethnic groups are in the bottom 20: American Indians (1.0%), Blacks (1.0%), and Mexican-Americans (1.0%). The White rate (1.8%) exceeds the minority rate (1.2%) by about 50%. This difference is greater for regional colleges than for national or state colleges, and is true regardless of selectivity or size. It would have been greater if it were not for the Orientals and Puerto Ricans which have a regional yield rate of 1.8% which is the same as for Whites.

• Paralleling the fact that the $30,000 or above group is in the top 20 is the appearance of the group with incomes below $6,000 in the bottom 20 (1.1%).

• Philosophy and religion appears to be an unusual subject area. Despite a high SAT average (484), students are not likely (rate of 1.1%) to send ATP reports to any particular regional college, as well as to any particular national or state college. They are interested in a relatively small number of colleges, and are less likely than other students to send multiple ATP reports.

Other Groups

Sex. The major differences here are by size. Males are more likely to send ATP reports to large regional colleges and females are more likely to send them to small regional colleges.

High school rank. Except for nonselective colleges, the same pattern of

positive relationship exists for regional colleges as for national colleges, but to a lesser extent. For example, for selective colleges, the top tenth rate is 2 1/2 times that of the bottom three fifths, compared to 6 times for national colleges.

Income. For selective regional colleges, the yield is related to income, but less so than for national colleges. For nonselective regional colleges, the situation is reversed from that of nonselective national colleges: the middle income groups are the most likely to show interest and low income groups are the least likely.

Educational goal. Graduate study intentions are positively related to a show of interest in selective and large regional colleges. However, Bachelor degree intentions are more prevalent for nonselective and small regional colleges.

Area of study. The four subject areas with the lowest yields were in the bottom 20. Five subject areas have high yields for regional colleges, three of which were also mentioned for national colleges: the physical sciences (1.8%), political science (1.8%), and premedicine (1.7%). The fourth, mathematics (1.9%), was also relatively high for national colleges. The fifth, forestry and conservation (1.8%), seems to be satisfied specially by large regional colleges. Along with forestry and conservation, large regional colleges also draw heavily on business and commerce potential majors. This area is the one drawn most heavily also to nonselective regional colleges, but not to selective or small regional colleges. The one subject area that is drawn most heavily to small regional colleges is military science. Generally, large and selective regional colleges attract those interested in the sciences, while small colleges attract those interested in the humanities.

STATE COLLEGES

The "state" colleges (in terms of drawing at least 75% from in-state, but

not necessarily in terms of control) are predominantly nonselective. Although the nonselective and medium academic level state colleges are average in size, the relatively few selective state colleges are mostly large.

The average state college received ATP reports from 4.9% of the students in the ATP from its state. This rate is much higher for large colleges (8.7%) than for small colleges (1.1%). With respect to academic level, the rate decreases with level: 6.8% for selective, 5.0% for medium level, and 4.1% for nonselective.

The Top 20

- As for national and regional colleges, the state college top 20 consists of Achievement Test takers. The highest yields of 8.1% are for the students who selected either of the two not-so-typical tests included in the student group analysis, American History or Biology, and received scores below 500.
- Whites (5.5%) are in the top 20 of state college yields. Three other ethnic groups are also in the top 20 and have higher yields: Puerto Ricans (7.1%), Orientals (6.2%) and Mexican-Americans (5.6%). In contrast, American Indians (4.3%) and Blacks (4.4%) have low yields. Of the 12 possibilities generated by the selective/nonselective and large/small dichotomies together with the national, regional, and state breakdown, 10 of 12 attract a greater proportion of the Whites than the minorities, the two that attract relatively more minorities are nonselective national colleges and small state colleges.
- Students interested in elementary education (in the state college top 20, with a 5.8% yield) and in education in general are more attracted to nonselective state colleges. Other high subject area state college yields are for architecture in large state colleges and for nursing in small state colleges.

The Bottom 20

- Seven of the 20 are subject areas. The lowest yield is for the subject area which also stood out for regional colleges, philosophy and religion (2.9%).

Other low yields for subject areas are 3.0% for military science, 3.4% for ethnic studies , 3.4% for trade and vocational, 3.9% for art, 3.9% for agriculture, and 3.9% for forestry and conservation (in which the large regional college yield was very high). Humanities (4.3%) is also in the bottom 20: selective state colleges are much more likely to attract intended majors in the sciences.

• Educational goals of a two-year program or degree (3.1%) and an undecided goal (4.3%) are both in the bottom 20. However, a two-year program or degree has the highest educational goal yield for small state colleges. The Bachelor's degree has the highest yield for nonselective state colleges, and graduate study has the highest yield for selective and large state colleges.

• Interestingly, students with very high test scores are among the lowest yield groups, particularly those over 600 on the English Composition Achievement Test (3.4%) and those over 700 on the SAT-V (3.9%). Also in the bottom 20 are students with very low SAT and TSWE scores. State colleges apparently attract predominantly students in the middle score ranges: high scorers are most attracted to the national colleges and low scorers both send fewer ATP reports and are less likely to attend any college.

• Students with fewer than four years of study in English have a low yield (3.8%).

• Whereas students who take the Mathematics Level I Achievement Test are in the state college top 20 (6.5%), English Composition Achievement Test takers are in the state college bottom 20 (4.2%). Perhaps this reflects the state college interest in sciences over the humanities.

. Students who prefer an off-campus apartment are also in the bottom 20 (4.3%).

Other Groups

Sex. Whereas national colleges are selected mostly by men, and for regional colleges the interest by sex depends on size (males attracted to the larger ones), state college attraction is predominantly female, especially for small and non-selective state colleges.

High school rank. The positive relationship between high school rank and yield that exists for national and regional colleges is tenuous at best for state colleges. For selective and large colleges it exists, but much less so than for national and regional colleges. For small state colleges, the relationship is reversed: they are more likely to attract students with lower ranks.

Income. On the average, middle income groups are most attracted to state colleges. Higher income groups are more attracted to selective state colleges and lower income groups are more attracted to small state colleges.

Other characteristics. Whereas high school varsity athletic participation is related to yield for national and regional colleges, it is not related to yield for state colleges. High school honors and awards, advanced placement plans, and self-reported skills and abilities are positively related to yield only for selective and large state colleges; they are negatively related to yield for nonselective and small state colleges.

FOLLOWUP APPLICATION ANALYSIS

Each student in the ATP receives three free report designations, and most use them. On the average, half (49%) of these designations are followed by an application. This application rate is highest for nonselective large colleges (57%) and lowest for nonselective small colleges (44%).

The Top 20

- The highest rates of all student groups are for Achievement Test takers of the two not-so-typical Achievement Tests included in the student group definitions: Biology (58%) and American History (57%). Apparently, students who have made the effort to take these tests are more likely to follow an ATP report with an application. This is true especially for selective colleges.
- For English Composition and Mathematics Achievement Tests, the lower the score the more likely the follow-through. Apparently, high scorers can preselect

themselves to the college of their choice, but low scorers need to apply to a greater number of colleges.

• The rather small group of students (about 12,000) scoring 700-800 on the SAT-V have a high follow-through rate (55%).

• Those with very high incomes and estimated parental contributions are less likely to be discouraged by finding out about the high costs of the college.

• Two subject areas where there may be extra-strong motivation for college have high application rates: political science (54%) and premedicine (53%).

The Bottom 20

• The lowest application rate is for those wanting a two-year program or degree (31%). In contrast, although graduate study (52%) just missed the top 20, it is positively related to application follow through.

• The second lowest application rate is for foreign students (35%).

• Unexpectedly, the next lowest rate is for those with advanced placement plans in the sciences (37%). Apparently, many of these students have one particular college in mind for their advanced placement.

• Half of the bottom 20 group are subject areas. Their common denominator appears to be that they are rather specialized and are not carried by many colleges. Perhaps, when a student who wishes to study one of these finds out that the college does not offer it, the student does not apply. The areas are: police science (39%), military science (40%), forestry and conservation (41%), computer science and systems analysis (43%), engineering (43%), nursing (43%), elementary education (43%), art (44%), education (44%), and music (44%).

• Mexican-Americans are the least likely ethnic group to follow through with an application (40%). Orientals are most likely to follow through for selective colleges, Whites are most likely for large colleges, and Blacks are most likely for nonselective and small colleges.

• Those who wish to live at home have a low application rate (40%); those who wish to live in a dormitory have a high rate (52%).

• Students with very low SAT and TSWE scores are less likely to follow through. This is particularly true for selective colleges, where 56% of the prospective applicants with SAT-V scores of 700 or above apply compared to 31% of those with SAT-V scores of below 300. This is the third stage of preselection based on aptitude - the first is the choice of college attendance, the second is the choice of college for an ATP report, and the third is the follow through with an application.

• The final group in the bottom 20 are students who do not take an Achievement Test.

Other Groups

Sex. Females are more likely than males to follow through at selective colleges.

Location. In-state students have higher application rates for nonselective and large colleges, while out-of-state students have higher rates for selective and small colleges.

High school record. High school rank is positively related to yield, especially for selective colleges. Numbers of years of study in English, foreign languages, mathematics, and physical sciences (but not biological or social sciences) are related to yields for selective and large colleges.

Self-reported skills and abilities. Students with high self-ratings are more likely to apply to selective or large colleges than those with low self-ratings.

ACCEPTANCE ANALYSIS

It is obvious that most of the college admissions selection process occurs before the application is made. The mean application acceptance rate is 75%. (Because of the skewness of the distribution of rates, the median is much higher: 84%). Perhaps surprisingly, the acceptance rate varies more by college size

than by academic level. Small colleges have a very high mean rate (medians will not be used here) of 82%, while large colleges have a low rate of 69%. So-called "nonselective" colleges (with SAT-V average below 435) have a 79% rate and so-called "selective" colleges (with SAT-V average of 480 or higher) have a 70% rate. Large selective colleges have the lowest acceptance rate of 65%.

The Top 20

. About two-thirds of the top 20 student groups are based on high ATP test scores. The highest acceptance rate, 87%, is for those scoring 60+ (the highest score) on TSWE. The second highest rate (86%) is for those scoring 600 or above on the SAT-V. These rates do not necessarily mean that test scores were used for acceptance decisions: other variables, such as high school record, which are positively correlated with test scores, could have been used.

. The remaining top 20 student groups are based on high school record. The highest is for those in the top tenth of their high school class (86%). Others are for honors courses in various subjects.

The Bottom 20

. The group with the lowest acceptance rate is the one which is based on an optimal weighting of test scores and high school record: those with a predicted GPA below 2.0 have an acceptance rate of only 34%.

. The next lowest acceptance rate is for SAT-M below 300 (40%). Other low-score SAT and TSWE groups also have low rates.

. The acceptance rate for the bottom three fifths of the high school class is 56%.

. Because of the rather specialized nature of programs which draw students from a large area, five subject areas are in the bottom 20: military science (56%), architecture (58%), forestry and conservation (58%), music (59%), and agriculture (61%). In addition, three other areas are in the bottom 20, perhaps because of

low SAT score averages for those wishing to study in these areas: physical education (SAT average 391, acceptance rate 58%); police science (419, 58%); and social work (411, 60%).

- Applications by Blacks are the least likely to be accepted (60%). Perhaps this is because Blacks are more likely to apply to colleges with academic levels higher than their own. For all types of colleges, Whites are more likely to be accepted than are minority students.
- Students who take the Biology Achievement Test do so possibly because they wish to apply to selective colleges, perhaps for a premedicine program. Students who score below 500 on this test have a low acceptance rate of 60%.
- Students with an educational goal of a two-year program or degree also have a low acceptance rate of 60%.

Other Groups

Sex. Women are more likely than men to be accepted at nonselective and large colleges.

High school type. Public high school applicants are more likely to be accepted at selective and large colleges than are private high school applicants.

Location. In-state students may enjoy an easier standard of acceptance at all types of colleges, especially at large and nonselective colleges.

High school clubs and organizations. Holding a major office in high school is definitely related to acceptance.

Income. Unexpectedly, middle income students have a higher acceptance rate than upper income students. Low income students have lower acceptance rates.

Other characteristics. Students with the following characteristics are more likely to be accepted: graduate study preference; dormitory preference; and high self-reported skills in mathematics, science, written expression, creative writing, and organizing for work. Students who wish to receive special assistance in mathematics, study skills, and personal counseling are less likely to be accepted.

ENROLLMENT ANALYSIS

Another important step in student self-selection for college admissions is the decision to enroll once accepted. Whereas a mean (across colleges) of 75% of the applications are accepted, only 55% of the acceptances result in enrollments. This rate varies inversely by academic level: selective colleges have a low yield of 51% while nonselective colleges have a higher yield of 59%. Small colleges have a slightly better yield than do large or medium-sized colleges. The lowest yield of 47% is for large selective colleges.

The Top 20

- The highest enrollment rate of 65% belongs to Mexican-Americans, a group that has a low application follow through rate. Apparently, although they use their three ATP reports, early in the admissions process Mexican-Americans decide which college they want, tend to apply there (and hardly anywhere else), and enroll upon acceptance.
- Student groups defined in terms of low test scores have high enrollment rates, such as 63% for SAT-V below 300. Apparently, the choice is a limited one for these students.
- Students who wish to commute, from home or an off-campus apartment, have a high yield of 61%. In-state students are also more likely to enroll.
- Two subject areas which may have been especially sought by students who apply have high enrollment yields: music (61%) and elementary education (60%).
- Those who do not take Achievement Tests have a high yield of 60%.
- Students with an undistinguished high school record apparently have fewer options and have a high enrollment yield: students in the bottom three fifths of their class (60%), with predicted GPA of 2.0-2.9 (59%), with no high school honor or award (58%), or with fewer than two years of study in a foreign language (58%).

• Students without graduate study intentions are more likely to enroll once accepted: 59% for a two-year program or degree and 58% for a BA or BS.

• Students with a low estimated parental contribution of below $600 have fewer alternatives and are more likely to enroll (58%).

• Students with self-reported skills and abilities that are below average in mathematics, organizing for work, science, and written expression are more likely to enroll (58%).

The Bottom 20

• Just as low test scores lead to high yields, high test scores lead to low yields. In contrast to the yield of 63% for those with an SAT-V below 300, the yield for those scoring 700-800 is only 34%. Obviously, the highest scoring students have the greatest number of options.

• Achievement Test takers, regardless of score, have a low yield of 43% compared to 60% for nontakers. The higher the score, the lower the yield - students with an average of 600-800 have a yield of only 36%.

• Evidently, distance reduces yield. Students who are outside of the region have a 45% yield compared to 59% for in-state students and 61% for commuters.

• Four subject areas that attract students with high academic credentials have yields in the bottom 20: English and literature (46%), physical sciences (47%), premedicine (47%), and political science (47%).

Other Groups

Sex. Males have very slightly higher yields than females.

High school type. Public high school students have higher yields than private high school students, particularly for small colleges.

Ethnic groups. Except for the highest yield group, Mexican-Americans, Whites have higher yields than do minority students, particularly for small colleges.

Personal counseling. Although just missing the bottom 20, students who seek personal counseling have a low enrollment yield of 48%. These students may have a low yield not because of other enrollment options, but because they do not enroll anywhere else.

Other characteristics. The following student groups have low enrollment yields: those wanting advanced placement, especially in foreign languages; those wanting to participate in various college activities, especially those seeking to participate in ethnic organizations in small colleges; and those with high self-reported skills and abilities.

DROPOUT ANALYSIS

What may be considered the last step in student self-selection is the decision to persist or drop out. The mean freshman persistence rate is 86%. Since this is so high, differences between groups may be clarified by using the dropout rate of 14% instead. (Because of the skewness of the distribution of dropout rates across colleges, the median dropout rate is only 10%.) The mean dropout rate is high for nonselective and for large colleges (both 17%), and low for selective colleges (11%) regardless of size.

The Top 20

- The highest dropout rates are for students with low test scores. The group with the highest rate of 26% is for those with an SAT-V score below 300. This rate is more than twice as high as for those scoring above 500. This difference is even greater in nonselective and large colleges. Other groups with high dropout rates are those scoring below 30 on TSWE (23%) and those scoring below 400 on SAT-M (20%). These students probably find college work very difficult.
- Commuters have high dropout rates. The group with the second highest dropout rate of 25% consists of those who want to live in an off-campus apartment. The rate for those wanting to live in an on-campus apartment is 20% and for those

wanting to live at home is 18%. A residence other than the dormitory or a fraternity or sorority appears to be conducive to dropping out.

• Another factor that seems to lead to dropping out is low income. Students from families with incomes below $6,000 have a 21% dropout rate and those with incomes from $6,000 to $8,999 have an 18% rate.

• Low high school rank is another factor. Of those in the bottom three fifths of their class, 20% drop out (compared to only 11% for those in the top tenth).

• Many of the students who have a need for personal counseling fail to persist: 19% drop out.

• Four subject areas that are rather technical in nature have a relatively high drop out rate: engineering (19%), nursing (19%), communications (18%), and psychology (18%). Although only 24 of the 251 colleges had the minimum of 25 enrolling freshmen interested in architecture or environmental design for a dropout rate to be calculated, the calculated mean of 28% for these colleges is the highest for any student group.

• Minority students have a higher dropout rate (18%) than do Whites (13%).

The Bottom 20

• Students motivated enough to take Achievement Tests have the lowest dropout rates, particularly those who do well on the tests. The lowest dropout rate of 9% is for those who score 600-800 on Biology. This rate is about one-third of that of students who score below 300 on the SAT-V.

• Low dropout rates appear for those students who are high in their high school class: 11% for those in the top tenth.

• High test scores on the TSWE and SAT also are indicative of low dropout rates. For example, the dropout rate for students scoring 60+ on TSWE is 11%, less than half of the rate (23%) for those scoring below 30.

Interestingly, although in-state students have an average dropout rate of 14%, students from contiguous states have a low dropout rate of 12%. In contrast, students from outside the region have a higher dropout rate of 16%.

Other Groups

Sex. Males are slightly more likely to drop out than females.

Educational goal. For large colleges, where there are enough students with two-year program or degree intentions to calculate a dropout rate, the rate is a whopping 35%, compared to 16% for those who want either graduate study or a Bachelor's degree.

Areas of study. Two areas of study with relatively low dropout rates are health-related professions and political science.

Years of study in high school subjects. The number of years of study in English (especially), mathematics, and foreign language are positively related to persistence. But there is no such relationship for biological science, physical science, or social studies.

Self-reported mathematical skill. Self-reported skill in mathematics is related to persistence in nonselective and large colleges.

Religious organizations. In nonselective colleges only, intention to participate in religious organizations is related to persistence.

CONCLUSIONS

National (and to lesser extent regional) colleges, particularly selective and large ones, tend to attract the most motivated students with the highest demonstrated aptitude for college work. Males, Whites, and students who can afford what are often relatively high costs of on-campus living tend to be attracted to selective and large national and regional colleges. "State"

colleges tend to be less selective, attracting students in the middle test ranges, students from middle income groups, females, and students interested in education and the sciences. The larger and more selective the state college, the more like a regional or national college it tends to be.

On the average, about half of a college's ATP reports result in an application: more for nonselective colleges, from Achievement Test takers, from those with high SAT scores, from high income groups, and from females; and less from students intending to major in several subject areas which are not as typically offered as most. A college accepts about three-quarters of its applications: more for small and nonselective colleges, students with high test scores and good high school record, in-state students, and middle income students; and less for several rather specialized subject areas. On the average, a little more than half of a college's acceptances result in enrollments: more for nonselective colleges, from Mexican-Americans and Whites, from commuters, from those interested in music, from those with low SAT scores and high school record, from those with a low educational goal, from those with low income, from those with low self-ratings, and from public high school students; and less from Achievement Test takers, those seeking personal counseling, and those seeking certain selective subject areas. About one-seventh of the students drop out by the end of their freshman year: more at nonselective and large colleges, by students with low test scores and low high school record, by those with low income, by commuters, by those seeking personal counseling, by those interested in some rather technical subject areas, and by minority students; and less by Achievement Test takers.